DOCUMENT RESUME

ED 182 753 CS 205 403

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TITLE The Cardston School Division Project for the Improvement in the Language Arts Using ECRI Procedures. Summary Report.
INSTITUTION Alberta Dept. of Education, Edmonton. Planning and Research Branch.
SPONS AGENCY Cardston School Div. No. 2 (Alberta).; Department of Indian Affairs and Northern Development, Ottawa (Ontario).
PUB DATE [78]
NOTE 27p.; For related document see CS 205 402

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Academic Achievement; Elementary Education; Foreign Countries; Inservice Teacher Education; *Language Arts; *Program Descriptions; *Program Evaluation; Reading Skills; Self Concept; Teaching Methods; Writing Skills
IDENTIFIERS Canada (Alberta)

ABSTRACT

This is a summary of the final report of the Cardston School Division Project for Improvement in the Language Arts, a three-year project in Alberta, Canada, using Exemplary Center for Reading Instruction (ECRI) strategies and materials and having as its objectives the improvement of language arts teaching, student achievement in language arts, students' self-concepts and social relations, and the learning rates of all elementary school students in the division. The 11 sections provide information relative to the following: motivation for the project; background and description of the ECRI training program; pupil development in ability, achievement, and self-concept over the three years of the project; pupil learning rate and retention over the three years of the project; a written composition study; a handwriting study; an attendance rates study; parent and teacher reactions to the program; possible outcomes of the project other than those evaluated through formal observation and testing; and general outcomes of the project. (FL)

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THE CARDSTON SCHOOL DIVISION PROJECT FOR THE IMPROVEMENT IN THE LANGUAGE ARTS USING ECRI PROCEDURES

(Summary Report)

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This project was jointly funded by Planning and Research Branch Alberta Education Department of Indian and Northern Affairs, Canada, and Cardston School Division No. 2

CS305403

THE CARDSTON SCHOOL DIVISION NO. 2

PROJECT FOR THE IMPROVEMENT IN THE LANGUAGE ARTS

USING ECRI PROCEDURES

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*ECRI = Exemplary Centre for Reading Instruction.

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THE CARDSTON SCHOOL DIVISION NO. 2 PROJECT FOR IMPROVEMENT IN THE LANGUAGE ARTS USING ECRI* PROCEDURES

INTRODUCTION: MOTIVATION FOR THE PROJECT

Because of the composition of its elementary school population (approximately 40% Indian, 20% Hutterite and 40% Other pupils) and its interest in providing improved instruction in reading and language, the Cardston School Division in 1975 launched a three-year language arts improvement project. The Exemplary Centre for Reading Improvement (ECRI) was employed to train the elementary school teachers of the Division in the use of its mastery procedures. At the same time the Division employed an external evaluation team, three from Brigham Young University plus a Canadian coordinator. In the design of the evaluation studies, no provision was made (purposely) for use of control groups of teachers and pupils. With respect to pupil achievement and self-concept development, it was agreed to use the percentile rankings of the tests administered for control comparisons. The Division was mainly interested, however, in the internal evaluation of teacher growth in relation to the ECRI Training Program and in pupil development in reading and language.

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*ECRI = Exemplary Centre for Reading Instruction.

Objectives of the Project

The objectives of the project as originally stated by the Cardston School Division were:

1. To improve the language teaching skills of all elementary teachers in the Cardston School Division through specific inservice training.

2. To improve the total language arts skills of all elementary school pupils in the Cardston School Division through the utilization of a concise and systematic approach to teaching.

3. To improve the self-image and social relationships of all elementary school pupils in the Cardston School Division through improved academic instruction.

4. To increase the learning rate of all elementary school pupils in the Cardston School Division in the area of the language arts through the use of special training skills and techniques employed by regular classroom teachers.

The external evaluation team, in consultation with a steering committee representative of the Cardston School Division, the Alberta Department of Education and the Lethbridge Regional Office of Education prepared detailed progress reports at the end of the first and second years of the project plus a final evaluation report. This summary report has been prepared to provide general information about the project and its outcomes.

BRIEF BACKGROUND AND DESCRIPTION OF THE ECRI PROGRAM

The Exemplary Centre for Reading Instruction (ECRI) Training Program emphasizes highly directed and structured teaching/learning situations with considerable teacher/pupil interaction. In a presentation by the Grant Wood Area Education Agency, Cedar Rapids, Iowa, in connection with a request for the funding of a project to implement the ECRI Training Program the following rationale and description was presented:

> The Exemplary Center for Reading Instruction ECRI) of Salt Lake City, Utah, came into being on May 1, 1966, through an Operational Grant under Title III of the Elementary and Secondary Education Act. This funding extended through the summer of 1970. The Center's original purpose was to identify critical teacher behaviors essential to prevent reading failure among students and provide inservice for teachers geared to the research findings. Federal funding was obtained again by ECRI from 1971 through 1974. This additional funding allowed the Center to continue to disseminate information and training related to essential teacher behavior and also to develop a prototype of an exportable multi-media programmed teacher kit for use in training teachers.
>
> The Center had identified the following teacher behaviors as being critically important in the prevention of reading failure.
>
> 1. Elicit responses from pupils.
> 2. Diagnose and prescribe instantly when errors or no responses occur.
> 3. Prompt (model, demonstrate) so pupils respond correctly (and are able to make finer discriminations) and gradually fade prompts until they respond correctly independently of the teacher.
> 4. Vary number of practices to each pupil's learning rate.
> 5. Increase rate of correct responses from pupils.

6. Establish high mastery levels of responses, with rate also as a criterion. Allow pupils to move on in skills sequence as rapidly as they achieve mastery.

7. Correlate language arts activities to increase number and types of responses (e.g., writing and spelling that which the pupil reads) and focus on the output languages (speaking and creative writing).

8. Employ behavior management techniques which most effectively extinguish incorrect responses, reinforce correct responses and maintain them at the rate and mastery levels established.

The most important finding of the Center has been that teacher behavior is much more important than teaching material in determining students' reading achievement. Therefore, the focus of the work was toward helping teachers display behaviors which prompt every student to learn as rapidly as possible.

The ECRI Program is a teacher training program for reading instruction. It can be adapted to any reading series a given district is currently utilizing. The basic theory of this program is that children learn best by using as many of their senses as possible. The children are encouraged to do all skill work in the language arts area orally.

They also read orally from their basal reading text. There is an immediate check if the student makes an error since he is able to hear the correct responses of the other students. The teacher can also quickly identify children experiencing difficulties by listening for individual responses which deviate from the group.

The program also encourages writing. A specific time period of the language arts block is allocated to creative writing and penmanship. Students learn to proof and correct their work from models. Correlation between the language activities is achieved by basing the spelling program on the vocabulary of the basal reading text. The child must write and spell that which is read.

The implementation of the ECRI teaching behaviors is dependent upon complete individualization in language arts instruction for pupils. A mastery level of 100% is a basic requirement. Students are required to orally read and to spell all the new words introduced in each of the stories in their basal reader. Pupils move on to new stories as they master the skills of the previous story.

ECRI has incorporated its statistical findings into a teacher-oriented program that combines both training experiences and packaged training kits. The training incorporates all the behaviors identified previously as being essential in preventing

> reading failure on the part of students. The teaching behaviors are as effective in secondary as in elementary grades and for disparate I.Q. levels, sexes, and cultures. This program is one of the most sought after Title III projects available for adoption.
>
> The twenty model training kits developed by the Center provide the directives and instructional sequence for developing a variety of skills. . . .

The external evaluation team for the Cardston School Division Language Arts Improvement Program assumes that the above is an accurate overview of ECRI and its program.

TEACHER FAITHFULNESS TO THE PROCEDURES OF THE ECRI TRAINING PROGRAM

In an effort to measure the faithfulness of Cardston School Division elementary school teachers with respect to the use of ECRI procedures in their classrooms, the external evaluation team carried through observational studies in 1975-76 and 1976-77 applying a powerful computerized system designated as TICOR.

In 1975-76 nine teachers were selected randomly, three who had had no ECRI training, three who had had one year of inservice ECRI training under the clinic staff of the Exemplary Centre for Reading Instruction, and three who, in addition to a year of inservice ECRI training, had previously had pre-service ECRI training in Salt Lake City. Successive observations were made to study teacher/pupil interaction on a number of pre-determined teaching/learning skills. The results when analyzed as described in the 1976 report to the Cardston School Division, showed distinct differences from group to group. The group with no ECRI training showed the least variety in the use of teaching skills, the group with one year of inservice ECRI training the most, and the group with one year of inservice ECRI training following prior ECRI instruction somewhere between the two, but closer to the second group. It was concluded that, to the extent that

the sample of teachers observed is representative of the elementary school teacher population of the Division, the teaching techniques and style of those who had had inservice ECRI training were reasonably faithful to the criteria of the ECRI Training Program.

In 1976-77 similar observations were made of seven Cardston School Division elementary school teachers judged by the ECRI clinical staff to show relatively high fidelity to ECRI procedures. The results, when analyzed as described in the 1977 report to the Cardston School Division, showed a high degree of faithfulness to ECRI procedures and practices with both teachers and pupils using multiple teaching and/or learning activities as identified and recommended by the Exemplary Centre for Reading Instruction.

In 1977-78 no further formal observations were made since it was concluded that, for those teachers who had been observed in the two previous years, the ECRI Training Program had resulted in the use of approved ECRI procedures. This was considered to have established the feasibility of the ECRI Training Program to modify the teaching/learning process.

In general, it was concluded that there was evidence that in practice those teachers observed who had had ECRI training were using, in varying degrees, ECRI procedures.

PUPIL DEVELOPMENT IN ABILITY, ACHIEVEMENT AND SELF-CONCEPT OVER THE THREE YEARS OF THE PROJECT: 1975-76 THROUGH 1977-78

In summary, the overall comparison of the 1978 pupil scores with the 1975 and/or 1976 pupil scores showed the following. The 1978 ability test scores showed a general positive increase over the 1975 testing. This occurred across all grades and for all ethnic groups.

On the Gates-MacGinitie Reading Tests, the 1978 Vocabulary subtest scores showed a decrease when compared with the 1975-76 scores. The Speed and Accuracy scores for 1978 showed a greater tendency to remain like the 1975-76 scores. The 1978 Reading Comprehension pupil data showed a fairly even balance between increases and decreases when compared with the 1975-76 pupil data. The comparison of the ethnic subgroups on the 1978 Gates-MacGinitie Reading test data showed a greater decrease across the 1978 subtests for the Indian and Hutterite pupils with the Other pupils tending to balance out between increases and decreases.

The 1978 pupil achievement data for the Stanford Tests showed that for Grade I there was a tendency to maintain the same relative position compared with that shown in the 1976 data. The Grade II 1978 Stanford test data showed a large overall increase compared with scores

for the same grade on the 1976 data. These trends held regularly across ethnic groups.

The data on the Canadian Test of Basic Skills for 1978 showed a general decrease across all subtests when compared with 1975-76 test results. The exception to this was on the 1978 Reading Comprehension subtest which showed a slight increase over the 1975-76 test results.

A comparison by ethnic subgroups on the 1978 Canadian Test of Basic Skills data showed that across all subtests there was a general increase for the Hutterite and a general decrease for the Indian and Other subgroups when compared with 1975-76 pupil scores.

The 1978 pupil self-concept scores for both the Pictorial and Piers-Harris tests showed very definite increases over the 1975 pupil scores. These increases on the 1978 scores held up across all ethnic subgroups.

From the above information, overall comparisons between 1978 and 1975-76 data on pupil scores showed that 106 of the 1978 scores increased over those of 1975-76. Of the other 137 scores, 79 showed decreases from 1975-76 scores while 58 remained the same.

PUPIL LEARNING RATE AND RETENTION OVER THE THREE YEARS OF THE PROGRAM

The Cardston School Division No. 2 used two separate reading programs throughout the three-year period of the project. They were the Ginn 360 Reading Program and the Sullivan Reading Program. Dr. Ethna Reid and her staff at the Exemplary Center for Reading Instruction have developed criterion referenced tests to monitor pupil mastery of material taught from each of the two reading programs. In the Ginn 360 Reading Program and the Sullivan Reading Program a mastery test was given to each pupil after completion of a reading unit or book. A specific level of reading mastery was required before each pupil was allowed to go on to the next unit or book.

The external evaluation team analyzed a sample of these data. In spelling achievement they found that the pupils had better success in mastering spelling words from the Ginn 360 Reading Program than from the Sullivan Reading Program. It was estimated from the combined mastery data covering both programs that the average pupil in the Cardston school system was able to learn 5.72 new spelling words per day. These data showed that it took an average of 107 days into the school year before the optimum level of spelling mastery was achieved with

regard to reading achievement. The pupils were found to have completed (mastered) 9.22 units or books for the school year 1976-1977. The number of school days needed to obtain the optimum was 86.16 days.

At the conclusion of the first year of the project the external evaluation team decided to monitor the pupil's ability to retain the reading material learned. The team requested that retesting be undertaken by the Cardston School Division.

Pupils in the samples received mastery tests which they had passed two, four, eight, and sixteen weeks prior to the day of retesting. These test data which covered a two-year period, 1976-78, showed that most of the pupils tested were able to demonstrate reading mastery on tests that they had passed up to sixteen weeks previously. However, with regard to spelling accuracy, the testing showed a slight falling off on spelling words that had been mastered on the first administration of the test. This loss in spelling ability was also noted in the parent evaluation of the program presented in the 1977-78 report.

WRITTEN COMPOSITION STUDY: 1975-76 AND 1977-78

In an effort to evaluate the ability of elementary school pupils in the Cardston School Division to express ideas effectively and creatively (the quality dimension) as well as accurately and acceptably (the mechanics dimension), written compositions were completed by the pupils in Grades IV, V, VI and VII in 1975-76 and in 1977-78. These compositions were scored by a panel of competent teacher evaluators using scales for quality and for mechanics of expression developed in 1953 by Baker and Coutts.

Comparisons and analyses of the assigned scores were made by grade (Total group), by ethnic subgroups (Indian, Hutterite, and Other), and by sex subgroups (Male and Female). Additional comparisons and analyses were made for matched pairs of pupils in Grades IV (1975-76) and Grade VI (1977-78), and in Grade V (1975-76) and Grade VII (1977-78).

The results showed small gains in the quality aspects of applied writing with the amount of change varying from grade to grade and from subgroup to subgroup. In general, there was a decline in the accurate and acceptable use of the mechanics of expression (spelling, punctuation, grammar and usage). Inspection showed a

greater frequency of error in spelling than in punctuation and grammar and usage.

It would be unwise to relate the slight gains or losses in the written composition study to the ECRI Training Program.

The written composition study, besides providing immediate information and a rich bank of student writing as a bench mark for future comparative studies, shows that much remains to be done to assist pupils to express themselves more effectively in writing and that this might be done by giving them more guidance in marshalling ideas, in organizing these coherently (logically or psychologically), and in presenting them with greater attention to clarity, variety, style and accuracy with respect to the mechanics of language. This might be accomplished, in part at least, by giving pupils frequent opportunities to express themselves through writing and speaking, by reading or listening to what they have expressed, and by having teachers give further positive attention to the improvement of written and spoken expression.

HANDWRITING STUDY: 1975-76 AND 1977-78

The evaluation team was asked to study samples of pupil handwriting. All Grade IV (1975-76), Grade VI (1975-76), and Grade VI (1977-78) written compositions (see above) were scored for proficiency in handwriting using the Saskatoon Public School Handwriting Scales. Using mean scores by total grade and by subgroups within grades, vertical comparisons were made from Grade IV (1975-76) to Grade VI (1975-76) and from Grade IV (1975-76) to Grade VI (1977-78); horizontal comparisons were made between Grade VI (1975-76) and Grade VI (1977-78). An additional comparison was made for Grade IV (1975-76) and Grade VI (1977-78) using only the data on paired pupils.

Few differences were found from the comparisons made. Handwriting seems to have remained, in general, about the same as it was at the beginning of the project period. Handwriting remains a vehicle of expression that would seem to merit more attention than it receives.

PERCENTAGE ATTENDANCE STUDY: 1973-74 THROUGH 1977-78

The percentage attendance of elementary school pupils in the Cardston School Division was studied for the years 1973-74 through 1977-78 to determine whether any trends were apparent that might be related to the Language Arts Improvement Program. The percentage attendance was graphed for the five years by total enrolment, by ethnic sub-groups and by individual schools. Details of the study are reported in the 1978 report of the external evaluation team.

It was found that, while there are fluctuations in percentage attendance from year to year, there is no overall trend except a general sameness by total group, by sub-group, and by individual school. The percentage attendance of Indian pupils continues to be lower than that of Hutterite and Other pupils. The variations in percentage attendance are no different than one would expect to occur from year to year on the basis of health, weather, and other related causes. Certainly there is nothing to suggest a relationship between percentage attendance and the Language Arts Improvement Program using ECRI procedures.

PARENT AND TEACHER REACTIONS TO THE LANGUAGE ARTS IMPROVEMENT PROGRAM

Two opinion studies were completed toward the end of the second year (1976-77) of the Language Arts Improvement Program. One study was made using a widely circulated questionnaire to parents. A second was an interview study by representatives of the Lethbridge Regional Office of Education of a sample of parents and teachers. In general, the opinions obtained from parent interviews verified the findings secured from the questionnaires.

The questionnaire study showed parents to be generally supportive of and satisfied with the program. A substantial number of parents considered the program constraining to some pupils and teachers. From the replies to the items of the questionnaire, it became clear that further communication between school and home is desirable. There was evidence, too, that a sizable number of parents want assurance that facets of the curriculum additional to the language arts are receiving adequate attention: art, music, drama, physical education, mathematics, science, social studies.

Many parents expressed the view that it is the teacher that makes the greatest difference in the educational process.

In the first interview study a large majority of parent participants expressed satisfaction with the program and wished to see it continued. They did, however, express concern that all facets of the curriculum be given due attention, that some of the vocabulary required to be mastered was rather specialized and outside the immediate needs of pupils, and that there seemed to be certain deleterious pressures and frustrations because of the repetitive and highly structured procedures followed.

In the second interview study the teachers sampled were generally positive in their assessment of the Language Arts Improvement Program, in its value to them as a means of invervice training, and in introducing them to techniques which, with some modification, they planned to continue to use.

The teacher sample interviewed expressed the desire for greater freedom of choice in determining which parts of the program to use with particular individuals and groups, a concern for pressure experienced in meeting the standards expected of them in the time available, and a concern related to the time required to make adequate preparation.

POSSIBLE OUTCOMES OF THE CARDSTON SCHOOL DIVISION LANGUAGE ARTS IMPROVEMENT PROJECT OTHER THAN THOSE EVALUATED THROUGH FORMAL CLASSROOM OBSERVATION AND ACHIEVEMENT AND SELF-CONCEPT TESTING

In the spring of 1978 an effort was made, during the final stages of the Language Arts Improvement Program, to secure opinions from a panel of parents and teachers relative to possible outcomes other than those evaluated through classroom observation and formal testing. A modified Delphi technique was used to secure statements from parent and teacher participants of what they considerated such outcomes might be. The statements thus generated presented a number of ideas which were phrased in statements to which the participants in a second mailing were asked to respond by expressing with respect to each strong agreement, agreement with reservation, disagreement, neutrality, inability to form a judgment because of insufficient information.

The 1978 report provides a detailed analysis of replies of parent, teacher and total participants to each of twenty-nine statements. Suffice it to say here that there was considerable, but far from unanimous, agreement with respect to the statements presented to the participants. The outcomes that seemed to have strongest support related to greater pupil involvement and interest in

reading and language in out-of-school situations, greater responsibility on the part of pupils for their own continuing learning, and greater integration of both Indian and Other pupils in the ongoing teaching/learning activities in the classroom.

GENERAL OUTCOMES OF THE PROJECT

The studies made by the external evaluation team showed that the ECRI Training Program has affected the teaching procedures, performance and styles of the Cardston School Division elementary school teachers. There is strong evidence that, in practice, those teachers observed were, in general, faithful to the ECRI Training Program. Pupil retention as measured by repeated administration of mastery tests after the passage of time remained reasonably high. Speed of learning appeared to have increased.

On the basis of the achievement and self-concept tests administered by the Cardston School Division, there is little or no evidence of pupil development in reading and language other than might be expected normally from year to year. Over the three years 1975-76 through 1977-78, the educational offerings in the language arts did not seem to have effected strikingly large gains or losses on the tests used.

The use of language in applied written assignments showed slight gains in quality of expression, slight losses in the mechanics (spelling, punctuation, and grammar and usage). There is insufficient evidence to relate these changes to the ECRI Training Program.

The study on handwriting showed no apparent differences for the pupils studied in Grades IV and VI (1975-76) and Grade VI (1977-78).

The study on percentage attendance of Cardston School Division elementary school pupils showed no overall trends, nor did there appear to be changes other than one might expect to occur from year to year.

The parent questionnaire and parent and teacher interview studies completed at the end of the second year of the project showed general satisfaction with the Language Arts Improvement Program, with the schools and with the teaching staff. A general conclusion was that the individual teacher makes the biggest difference in the educational development of the pupils. Various reservations and criticisms by parents and teachers were presented in the major 1977 report.

There is some evidence of outcomes other than those related to teacher performance and pupil achievement and self-concept development. A study related to such outcomes forms part of the 1978 major report. Among the most important outcomes other than those measured by formal observation and testing were opinions that there was greater pupil interest and involvement in reading and language activities at home, greater acceptance by pupils of responsibility for their own learning, and integration of both Indian and Other pupils in classroom teaching/learning situations.

Above all, the project has focused attention on the importance of the language arts and the need for ongoing emphasis on curriculum planning and program development related to them.